

## ABSTRACT

A system for monitoring the position and orientation of a downhole tool assembly having multiple beacons. In a preferred embodiment the first and second beacons are supported by the downhole tool assembly. Both beacons are adapted to transmit signals that are indicative of the orientation and position of the downhole tool assembly. A receiving assembly detects the signals transmitted from the first and second beacons. The receiving assembly transmits the detected signals to a processor that processes the signals to produce a composite of the relative positions and orientations of the receiving assembly and the downhole tool assembly. The composite of the relative positions of the receiving assembly and the downhole tool assembly are communicated to the operator using a display. The orientations of the first and second beacons are also communicated to the operator using the display.

LFG/82380-541/534695\_I